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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/851,465    05/05/97    ROBINSON    E    INT21246

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QM02/1121

EXAMINER

LEE, D

ART UNIT

PAPER NUMBER

3743

AIR MAIL

DATE MAILED:

11/21/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
08/851,465

Applicant(s)  
Robinson et al

Examiner  
David Lee

Group Art Unit  
3743



☒ Responsive to communication(s) filed on Aug 29, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-8 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nutten et al '406*. *Nutten et al '406* discloses substantially the claimed invention including a liquid fuel burner assembly comprising an air aspirated nozzle (see figures), a compressor to provide air under positive pressure to the air aspirated nozzle, a fuel supply tank to supply fuel at ambient pressure (non-pressurized) to the air aspirated nozzle, the fuel entering the nozzle under negative pressure created by air entering the air aspirated nozzle under positive pressure, a manual isolation valve 58, pressure actuated valve arrangements for controlling flow of liquid fuel to the burner. *Nutten et al '406* does not disclose a manual metering valve interposed between the liquid fuel supply and the air aspirated nozzle for increasing or decreasing the fuel flow, metering valve is positioned between nozzle and regulator.

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*Velie* disclose air aspirated liquid fuel burner nozzle with fuel supply and manual metering valve for increasing or decreasing the liquid fuel flow to the nozzle. It would have been obvious to one skilled in the art at the time of the invention to use the teaching of manual metering valve of *Velie* with the liquid fuel burner of *Nutten et al* for the desirable purpose of manual adjusting and setting the burner intensity by adjusting the liquid fuel flow.

In regards to the preamble citing "infrared burner", the burner assembly of *Nutten et al* '406 meets the claimed structure, and therefore is considered an infrared burner, further the body of the claim does not cite the burner as being infrared or refer back to the preamble.

3. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nutten et al* '406 in view of *Velie* as applied to claim 1 above, and further in view of *Hapgood* '221. *Nutten et al* '406 as modified by *Velie* as discussed above discloses substantially the claimed invention except the regulator is a zero pressure regulator.

*Hapgood* '221 discloses zero pressure regulator in a fuel burner which can use either gas or liquid fuel, zero pressure regulator maintains zero pressure at an aspirated fuel nozzle which prevents fuel from unsafely discharging from the fuel nozzle when no suction is applied.

It would have been obvious to one skilled in the art at the time of the invention to use a zero pressure regulator as taught by *Hapgood* '221 with the liquid burner assembly of *Nutten et al* '406 as modified by *Velie* for the desirable purpose of providing a safer heating apparatus which has the desirable feature of no fuel discharged when suction is not applied.

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In regards to claim 6 the compressor is operatively connected to the fuel tank via the aspirated nozzle and thereby creates a suction in the fuel tank which draws out the fuel.

In regards to claims 7 and 8 the isolation valve 58 (a valve) is interposed (as broadly cited) between the compressor via the aspirator nozzle to the fuel tank, the valve having a first and second positions, first position allow vacuum created from the compressor to be applied to the fuel tank, second position isolating the compressor from the fuel tank. In regards to the valve is position between metering valve and the nozzle is considered an obvious matter of design choice, the use of isolation valves at differing positions in fuel lines is well known as evidence by the prior art made of record and is considered an obvious matter of design choice absent the showing by the applicant of any unusual or unexpected results beyond isolation over the prior art made of record.

### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Of significant interest, *Haruhara* and *Ishihara* disclose liquid fuel infared burners with non-pressurized fuel tanks. *Varvel* and *Briggs* disclose air aspirated liquid fuel nozzles in burners with non pressurized fuel tanks. *Bonne et al* disclose fuel control using metering valve directly upstream fuel nozzle.

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5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to David B. Lee whose telephone number is (703) 305-0181. The examiner can normally be reached on weekdays from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus, can be reached on (703) 308-1935. The fax phone number for this Group is (703) 308-7764.

dbl

11/17/2000

  
Ira S. Lazarus  
Supervisory Patent Examiner  
Group 3700